CLAIMS

What is claimed is:

1. An organic electroluminescent device comprising:

a substrate;

a first electrode to define a pixel region on the substrate;

multiple organic film layers to perform light emission on the first electrode; and

a second electrode formed on the multiple organic film layers,

wherein the multiple organic film layers comprise:

an emitting layer; and

at least one of a hole injection layer and a hole transfer layer;

wherein the at least one of the hole injection layer and the hole transfer layer comprises an electron acceptor material.

2. The organic electroluminescent device according to claim 1, wherein the electron acceptor material is selected from the group consisting of:

an aromatic compound having one of: a nitro group and a cyano group;

an olefin compound having one of: a nitro group and a cyano group;

a perylene compound having one of: a nitro group and a cyano group;

a heterocyclic compound having one of: a nitro group and a cyano group; and

a material selected from the group consisting of 2,4,7-trinitrofluorenone, 2,4-dinitroaniline, 5-nitroanthranilonitrile, 2,4-dinitrodiphenylamine, 1,5-dinitronaphthalene, and 3,5-dinitrobenzonitrile.

3. The organic electroluminescent device according to claim 1, wherein 0.01 to 10 wt.% of the electron acceptor material comprises a total weight of at least one of the hole injection layer and the hole transfer layer.

4. The organic electroluminescent device according to claim 1, wherein the multiple organic film layers further comprise at least one layer selected from the group consisting of a hole-blocking layer, an electron transfer layer and an electron transport layer.

5. The organic electroluminescent device according to claim 1, wherein a thickness of at least one of the hole injection layer and the hole transfer layer is 1 to 4,000 Å.

6. The organic electroluminescent device according to claim 4, wherein the hole-blocking layer, the electron transfer layer and the electron transport layer each comprise an electron donor material.

7. The organic electroluminescent device according to claim 6, wherein the electron donor material is selected from the group comprising:

an aromatic compound having one of a hydrogen, an alkyl group, a phenyl group, an NR_2 group, an OR group and an SiR_3 group;

an olefin compound having one of a hydrogen, an alkyl group, a phenyl group, an NR_2 group, an OR group and an SiR_3 group;

an allene compound having one of a hydrogen, an alkyl group, a phenyl group, an NR_2 group, an OR group and an SiR_3 group;

a thiophene compound having one of a hydrogen, an alkyl group, a phenyl group, an NR_2 group, an OR group and an SiR_3 group;

a fulvalene heterocyclic compound having one of a hydrogen, an alkyl group, a phenyl group, an NR_2 group, an OR group and an SiR_3 group; and

an electron donor material selected from the group consisting of poly(3,4-ethylene-dioxythiophene), tetraphenylethylene, azulene, 1,2,3,4-tetraphenyl-1,3-cyclophentadiene, and bis(ethylenedithio)tetrathiafulvalene.

8. The organic electroluminescent device according to claim 6, wherein 0.01 to 50 wt.% of the electron donor material comprises a total weight of at least one of the hole-blocking layer, the electron transfer layer and the electron transport layer.

9. The organic electroluminescent device according to claim 6, wherein the at least one of the hole-blocking layer, the electron transfer layer and the electron transport layer are formed by one of: spin-coating, front deposition and co-deposition.

10. The organic electroluminescent device according to claim 6, wherein a

thickness of at least one of the hole-blocking layer and the electron transfer layer is 1 to 4,000 Å.

11. An organic electroluminescent device comprising:

a substrate;

a first electrode to define a pixel region on the substrate;

multiple organic film layers to perform light emission on the first electrode; and

a second electrode formed on the multiple organic film layers,

wherein the multiple organic film layers comprise:

an emitting layer; and

at least one of:

a hole-blocking layer;

an electron injection layer; and

an electron transfer layer,

wherein the at least one of the hole-blocking layer, the electron injection layer and the electron transfer layer comprise an electron donor material.

12. The organic electroluminescent device according to claim 11, wherein the electron donor material is selected from the group consisting of:

an aromatic compound having one of a hydrogen, an alkyl group, a phenyl group, an NR_2 group, an OR group and an SiR_3 group;

an olefin compound having one of a hydrogen, an alkyl group, a phenyl group, an NR_2 group, an OR group and an SiR_3 group;

an allene compound having one of a hydrogen, an alkyl group, a phenyl group, an NR_2 group, an OR group and an SiR_3 group;

a thiophene compound having one of a hydrogen, an alkyl group, a phenyl group, an NR_2 group, an OR group and an SiR_3 group;

a fulvalene heterocyclic compound having one of a hydrogen, an alkyl group, a phenyl group, an NR_2 group, an OR group and an SiR_3 group; and

an electron donor material selected from the group consisting of poly(3,4-ethylene-dioxythiophene), tetraphenylethylene, azulene, 1,2,3,4-tetraphenyl-1,3-cyclophentadiene, and bis(ethylenedithio)tetrathiafulvalene.

13. The organic electroluminescent device according to claim 11, wherein 0.01 to 50 wt.% of the electron donor material comprises a total weight of the at least one of the hole-blocking layer, the electron injection layer and the electron transfer layer.

14. The organic electroluminescent device according to claim 11, wherein the multiple organic film layers further comprise at least one of the hole injection layer and the hole transport layer.

15. The organic electroluminescent device according to claim 11, wherein the at least one of the hole-blocking layer, the electron injection layer and the electron transfer layer are formed by one of: spin-coating, front deposition and co-deposition.

16. The organic electroluminescent device according to claim 11, wherein a thickness of the at least one of the hole-blocking layer, the electron injection layer and the electron transfer layer is 1 to 4,000 Å.